

IN THE CLAIMS:

Claims 7 through 29, 34, and 39 were previously canceled herein without prejudice or disclaimer. Claims 1 and 40 have been amended herein. All of the pending claims 1 through 6, 30 through 33, 35 through 38, and 40 through 50 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of Claims:

1. (Currently amended) A method for producing a recombinant adenovirus comprising a gene of interest, without the concomitant production of replication competent adenovirus through homologous recombination, said method comprising:

providing a cell, said cell ~~comprising a first nucleic acid encoding functional E1A protein and E1B protein~~ being an isolated adenovirus packaging cell comprising:

a first nucleic acid sequence, in the isolated adenovirus packaging cell's genome, encoding adenovirus E1A and E1B gene products but lacking a nucleic acid sequence encoding adenovirus pIX;

transferring into said cell, a recombinant nucleic acid comprising:

at least one encapsidation signal, a nucleic acid encoding pIX protein of an adenovirus, and at least one functional Inverted Terminal Repeat, said recombinant nucleic acid further comprising a gene of interest and all sequences required for replication of said recombinant nucleic acid which are not provided by said cell; said recombinant nucleic acid lacking overlapping sequences with the first nucleic acid, which overlap could otherwise lead to homologous recombination resulting in the formation of replication competent adenovirus;

culturing said cell; and

harvesting recombinant adenovirus produced from said cell.

2. (Previously Presented) The method according to claim 1 wherein said recombinant nucleic acid is one nucleic acid molecule in linear form and comprises functional Inverted Terminal Repeats at or near both termini.

3. (Previously Presented) The method according to claim 1 wherein said cell is derived from a primary cell.

4. (Original) The method of claim 1 wherein said recombinant nucleic acid is DNA

5. (Original) The method of claim 2 wherein said recombinant nucleic acid is DNA.

6. (Original) The method of claim 3 wherein said recombinant nucleic acid is DNA.

7. through 29. (Canceled).

30. (Previously Presented) The method of claim 1, wherein said cell is a human cell.

31. (Previously Presented) The method of claim 1, wherein said first nucleic acid is integrated into the genome of said cell.

32. (Previously Presented) The method of claim 1, wherein said cell is derived from a retina cell.

33. (Previously Presented) The method of claim 1, wherein said cell is derived from an embryonic cell.

34. (Cancelled).

35. (Previously Presented) The method of claim 1, wherein said first nucleic acid contains nucleotides 459-3510 of the human adenovirus genome.

36. (Previously Presented) The method of claim 1, wherein said cell is a PER.C6 cell, as deposited under No. 96022940 at the European Collection of Animal Cell Cultures.

37. (Previously Presented) The method of claim 1, wherein said cell further harbors

nucleic acid encoding an E2A gene product of an adenovirus.

38. (Previously Presented) The method of claim 37, wherein said E2A gene product has a temperature sensitive 125 mutation.

39. (Canceled).

40. (Currently Amended) A method for producing a recombinant adenovirus comprising a gene of interest, without the concomitant production of replication competent adenovirus through homologous recombination, said method comprising:

providing a cell, said cell ~~comprising a first nucleic acid encoding functional E1A protein and E1B protein being an isolated adenovirus packaging cell comprising:~~

a first nucleic acid sequence, in the isolated adenovirus packaging cell's genome, encoding adenovirus E1A and E1B gene products but lacking a nucleic acid sequence encoding adenovirus pIX;

transferring into said cell at least two nucleic acid molecules that upon homologous recombination in said cell are capable of forming a recombinant nucleic acid comprising at least one encapsidation signal, a nucleic acid encoding pIX protein of an adenovirus, and at least one functional Inverted Terminal Repeat, said recombinant nucleic acid further comprising a gene of interest and all sequences required for replication of said recombinant nucleic acid which are not provided by said cell; said recombinant nucleic acid lacking overlapping sequences with the first nucleic acid, which overlap could otherwise lead to homologous recombination resulting in the formation of replication competent adenovirus;

culturing said cell; and

harvesting recombinant adenovirus produced from said cell.

41. (Previously Presented) The method according to claim 40 wherein said at least two nucleic acid molecules are in linear form.

42. (Previously Presented) The method according to claim 40 wherein homologous recombination of said at least two nucleic acid molecules forms a linear recombinant nucleic acid with functional Inverted Terminal Repeats at or near both termini.

43. (Previously Presented) The method according to claim 40 wherein said cell is derived from a primary cell.

44. (Previously Presented) The method of claim 40 wherein said recombinant nucleic acid is DNA

45. (Previously Presented) The method of claim 42 wherein said recombinant nucleic acid is DNA.

46. (Previously Presented) The method of claim 43 wherein said recombinant nucleic acid is DNA.

47. (Previously Presented) The method of claim 40, wherein said first nucleic acid contains nucleotides 459-3510 of the human adenovirus genome.

48. (Previously Presented) The method of claim 40, wherein said cell is a PER.C6 cell, as deposited under No. 96022940 at the European Collection of Animal Cell Cultures.

49. (Previously Presented) The method of claim 40, wherein said cell further harbors nucleic acid encoding an E2A gene product of an adenovirus.

50. (Previously Presented) The method of claim 49, wherein said E2A gene product has a temperature sensitive 125 mutation.